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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,900	03/23/2005	Tomonobu Matsuda	KNI-201-A	4167

21828 7590 03/24/2006

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EXAMINER	
NGUYEN, SANG H	
ART UNIT	**PAPER NUMBER**
2877	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/528,900	MATSUDA, TOMONOBU
	Examiner	Art Unit
	Sang Nguyen	2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/23/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's response to Pre-amendment filed on 03/23/05 has been entered. It is noted that the application contains claims 1-15 by the Pre-Amendment on 03/23/05.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "**another condenser**" in claims 4 and 15; and the "**the condensers are provided on opposite sides of the flow cell**" in claims 4 and 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 03/23/05 has been entered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 5, 8-11, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (U.S. Patent No. 6,465,802) in view of Takayama et al (U.S. Patent No. 5,601,983).

Regarding claim 1, 8-9, and 12; Matsuda ('802) discloses a particle measuring apparatus (figure 1) comprising:

a flow cell (1 of figure 1) in which a particle monitoring area considered to be a measurement region (M of figure 1) is formed in a first passage (1a of figure 1) by irradiating the flow cell (1 of figure 1) with light (La of figure 1); and

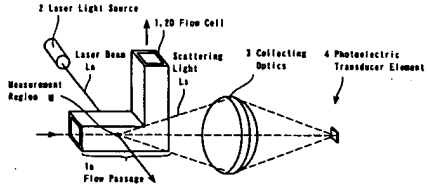
a collecting optics (3 of figure 1) which collecting light scattered (Ls of figure 1) by particles contained in sample fluid (6 of figure 2 and col.3 lines 5-10) passing though the

particle monitoring area (1a of figure 1) so as to obtain information including diameter of the particles (col.3 lines 6-7),

wherein a central axis (figure 1) of the first passage (1a of figure 1) substantially corresponds to an optical axis (figure 1) of the condenser (3 of figure 1) and inner walls (5b of figure 2) of the flow cell (1 of figures 1-2) are shaped so as not to impede the scattered light (Ls of figure 1) from entering an outmost peripheral portion (figure 1) of the condenser (3 of figure 1) at a position (M of figure 1) where the condenser (3 of figure 1) is arranged relative to the flow cell (1 of figure 1).

U.S. Patent Oct. 15, 2002 Sheet 1 of 6 US 6,465,802 B1

FIG. 1



U.S. Patent Feb. 11, 1997 Sheet 1 of 12 5,601,983

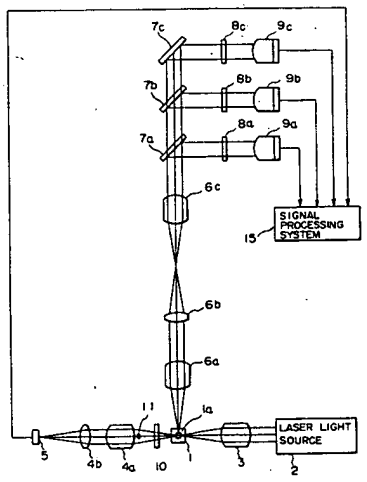


FIG. 1

Matsuda discloses all of features of claimed invention except for a condenser for condensing the scattering lights. However, Takayama et al teaches that it is known in the art to provide a condenser lens (4a, 6a of figures 1 and 6) for condensing the

scattering lights (figures 1 and 4) from the flow cell (1 of figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Matsuda's device with a condenser for condensing the scattering lights as taught by Takayama et al for the purpose of focusing accuracy the scattering light from the flow cell

Regarding claims 2 and 13; Matsuda discloses flow cell (1 of figure 1) comprises a second passage (figure 1) which is substantially perpendicular to the first passage (1a of figure 1) and extends continuously therefrom (figure 1).

Regarding claim 5; Matsuda teaches the second passage (figure 1) extends continuously from the first passage (1a of figure 1), the inner walls (5b of figure 2) of the flow cell (1 of figure 1) define an opening (figure 1) communicating said first and second passages (figure 1) , and said opening (figure 1) of the first and second passages (1a of figure 1) being sufficiently large so as not to impede the scattered light (Ls of figure 1) from entering the outmost peripheral portion of the condenser (3 of figure 1) .

Regarding claims 10-11; Matsuda discloses the first passage (1a of figure 1) and second passage (figure 1 is perpendicular the first passage)have a substantially rectangular cross sectional shape (figure 1).

Claims 3-4, 6-7, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda in view of Takayama et al as applied to claims 1 and 12 above, and further in view of Morgan et al (U.S. Patent No. 5,371,585).

Regarding claims 3 and 14; Matsuda discloses the flow cell (1 of figure 1) comprises a second passage (figure 1) having a central axis of the second passage

substantially corresponds to that of the first passage (figure 1) and extending continuously from the first passage (1a of figure 1). Matsuda shows all of features of claimed invention except for the second passage of the flow cell having a pyramidal shape or a conical shape. However, Morgan et al teaches that it is known in the art to provide particle detecting instrument (figure1) comprises a flow cell (13 of figure 1) having the first or second passage considered to be conical passageways (40 of figures 2 and 4 and col.3 lines 62-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Matsuda's device with the second passage of the flow cell having a pyramidal shape or a conical shape as taught by Morgan et al for the purpose of generating a high level of background scattered light from the walls cell.

Regarding claims 6-7; Matsuda discloses the second passage (figure 1) extends continuously from the first passage (1a of figure 1).

Regarding claims 4 and 15; Matsuda discloses the flow cell (1 of figure 1) comprises the first passage (1a of figure 1) is perpendicular to the second passage (figure 1), wherein the second passage (figure 1) provide on the upstream side and the downstream side of the flow cell (1 of figure 1) and the central axes of the second passage (figure 1) substantially correspond to the first passage (1a of figure 1).

Matsuda discloses all of features of claimed invention except for another condenser, wherein the condensers are provide on opposite sides of the flow cell. However, Takayama et al teaches that it is known in the art to provide two condensers (6a, 4a of figure 6), wherein the condensers (6a, 4a of figure 6) are provide on opposite

sides of the flow cell (1 of figure 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Matsuda's device with another condenser, wherein the condensers are provide on opposite sides of the flow cell as taught by Takayama et al for the purpose of focusing accuracy the scattering light from the flow cell for measuring particles on the flow cell.

Matsuda in view of Takayama et al shows all of features of claimed invention except for the second passage of the flow cell having a pyramidal shape or a conical shape. However, Morgan et al teaches that it is known in the art to provide particle detecting instrument (figure1) comprises a flow cell (13 of figure 1) having the first or second passage considered to be conical passageways (40 of figures 2 and 4 and col.3 lines 62-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Matsuda's device with the second passage of the flow cell having a pyramidal shape or a conical shape as taught by Morgan et al for the purpose of generating a high level of background scattered light from the walls cell.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamaguchi et al (6184983) discloses method and apparatus for measuring turbidity; Sakamoto et al (6118536) discloses circular dichroism detection for HPLC; Kosaka et al (5506673) discloses particle analyzer; Ashida (4906094) discloses fine particle measuring method and system; Nelson (4276475) discloses novel hotometric system; or Fulwyle et al (3710933) multisensor particle sorter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 14, 2006
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Patent Examiner
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Gregory J. Toatley, Jr.
Supervisory Patent Examiner
Art Unit 2877
17 March 06